

Chapter 5: Alternative Water Supply Annual Report

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INTRODUCTION

For more than a decade, the South Florida Water Management District (SFWMD or District) has been engaged in cooperative funding agreements for alternative water supply systems and stormwater management projects.

Subsection 373.1961(2), Florida Statutes (F.S.), encourages governing boards of the water management districts to include funding for the development of alternative water supply systems in their annual budgets. Water management districts must share a portion of their *ad valorem* tax revenues with public and private entities willing to develop suitable alternative water resources. Alternative water supply systems are defined by Paragraph 373.1961(2)(i), F.S., as follows:

(h) For purposes of this subsection, alternative water supplies are supplies of water that have been reclaimed after one or more public supply, municipal, industrial, commercial, or agricultural uses, or are supplies of stormwater, or brackish or salt water, that have been treated in accordance with applicable rules and standards sufficient to supply the intended use.

The statute further requires that each district submit an annual report on alternative water supply funding to the Governor, the President of the Senate and the Speaker of the House of Representatives. This report will describe all alternative water supply projects funded by the SFWMD for Fiscal Year 2005 (FY2005) and is intended to satisfy the reporting requirement of the statute. This fiscal year began on October 1, 2004 and will end on September 30, 2005.

In FY2005, the SFWMD contributed \$6 million to 28 water supply projects as part of the Alternative Water Supply (AWS) Funding Program.

FISCAL YEAR 2005 ALTERNATIVE WATER SUPPLY FUNDING PROGRAM

To be eligible for the AWS Funding Program, projects must propose the development of capital facilities for effective and appropriate alternative water supplies. Until 2002, eligible projects were limited to proposed alternative water supplies within a designated Water Resource Caution Area. However, in 2002, legislation was passed to allow for proposed projects in all areas. The Kissimmee Basin Planning Area has now been represented in the FY2004 and FY2005 annual reports.

The SFWMD established an AWS Funding Selection Committee composed of utility and environmental interest representatives. In FY2005, the SFWMD received 41 requests for funding in response to the AWS Funding Program application process. Thirty proposals were deemed eligible for consideration. A public workshop was held to allow selection committee members to discuss the proposals with the applicants. The eight-member selection committee reviewed and ranked the proposals based on statutory requirements and evaluation criteria established by the District's governing board. The selection committee then recommended a list of eligible projects to the governing board. As part of the overall budget process, the governing board established the funding level for the entire AWS Funding Program and each of the eligible project proposals.

Twenty-eight proposals were approved for alternative water supply funding in FY2005. A summary of the funded projects is presented in **Table 5-1** below.

Table 5-1. Summary of FY 2004-FY2005 Alternative Water Supply Grant Program projects and funding.

Applicant Project Title Project Description	Additional Water (mgd)	SFWMD Funding	Total Project Cost
City of North Miami Beach Floridan Aquifer Low Pressure Reverse Osmosis (RO) Treatment Facilities Construction of a Floridan Aquifer low pressure RO treatment facility to provide treatment for 6.0 million gallons per day (mgd) as part of a permit-mandated water system improvement program.	6.50	\$300,000	\$3,657,000
Town of Manalapan Reverse Osmosis Water Treatment Plant Construction of a new 2.35 mgd water treatment plant using RO technology to process 1.70 mgd of Floridan Aquifer brackish water and blend with 300,000 gallons per day surficial water for the final delivery product.	1.99	\$300,000	\$3,104,706
South Central Regional Wastewater Treatment & Disposal Board Reuse Plant Expansion – Phase 3 Advanced wastewater treatment to allow 100% reuse through construction of a 36-inch reclaimed water pipeline, construction of a wastewater treatment plant, construction of a 3 mgd reclaimed water storage tanks, and expansion of existing reclaimed water filters.	14.00	\$607,000	\$12,672,000
Jupiter Utilities Nanofiltration Concentrate Construction of a reuse water transfer pipeline to convey nanofiltration concentrate from the Town of Jupiter to the Loxahatchee River District reuse storage lakes for blending and augmentation of the region's non-potable irrigation water supply.	3.60	\$359,000	\$717,078
Village of Tequesta RO Expansion Construction of a new 1.20 mgd membrane train inside the existing RO treatment plant.	0.80	\$430,000	\$1,375,000
Seacoast Utilities Reclaimed Water Mains Construction of 8,000 linear ft of new reclaimed water mains and conversion of 10,000 linear ft of wastewater force mains to reclaimed mains.	4.00	\$399,000	\$798,000
Jupiter Utilities RO Water Treatment Plant Expansion A 1.70 mgd expansion of the RO plant will bring the plant to its ultimate capacity of 13.7 mgd of finished water to serve its customers from the brackish Floridan Aquifer.	1.70	\$300,000	\$3,500,000

Table 5-1. Continued.

Applicant Project Title Project Description	Additional Water (mgd)	SFWMF Funding	Total Project Cost
City of Stuart Reclaimed Water System Phased implementation of a reclaimed water system that will provide irrigation for recreational and public facilities. This first phase of the reclaimed system will involve modifications to the city's existing wastewater treatment plant. The total cost of the project is \$2,530,000.	0.22	\$380,000	\$760,000
Collier County Reclaimed Water ASR Construction of one pilot ASR well and two monitoring wells to provide seasonal storage of reclaimed water in the wet season and recovery during the dry season when demand is greatest.	1.37	\$450,000	\$2,165,000
United Civic Organization, Inc. Century Village West Palm Beach Irrigation Construction of an irrigation system for Century Village that will use surface water that is replenished with up to 0.75 mgd of reclaimed water from the PBC Water Utilities Department.	0.20	\$55,000	\$115,000
Palm Beach County Reclaimed Water System Expansion Installation of 2,800 ft of 24-inch reclaimed water distribution main to provide up to 1.50 mgd to Glenage Golf Course.	1.50	\$200,000	\$466,900
Martin County Utilities RO Water Treatment Plant Expansion Martin County's Consolidated Water System Capital Improvement Program includes expansion of the Tropical Farms RO water treatment plant. Expansion of this facility includes construction of five Floridan wellheads for future withdrawal from an alternative water supply.	2.00	\$430,000	\$860,000
City of Lake Worth Floridan Aquifer Test Well Drill a Floridan Aquifer test well to provide information on water quality and well yield. The test well has been designed for later conversion to a production well that will deliver 2.0 mgd of raw water, and 1.50 potable water after RO.	1.50	\$300,000	\$1,300,000
Toho Water Authority Stormwater Treatment Construct a stormwater treatment system that will provide supplemental water for reuse and Floridan Aquifer recharge.	4.00	\$150,000	\$5,250,000
Collier County Utilities Manatee Road ASR Expansion Expansion of Manatee Road ASR system; includes construction of two ASR wells with attendant piping and wellhead equipment.	2.00	\$150,000	\$787,700
City of Delray Beach Area 1 Reclaimed Water System Installation of 30-inch and 24-inch reclaimed water main to serve new reclaimed water users (Atlantic High School and Delray Beach Municipal Golf Course).	0.63	\$150,000	\$1,362,016
Orange County Utilities North Golf Course at Grand Cypress Alternative water supply for irrigation of the North Golf Course at Grand Cypress Resort and median landscaping for the GCR plus additional areas of Orange County.	3.00	\$150,000	\$552,474
Martin County Utilities WWTP Reuse Main to Highlands Reserve Construction of a 9,500 linear ft of a 16-inch diameter reuse main from the Tropical Farms WWTP to the Highland Reserves development.	0.20	\$150,000	\$794,000

Table 5-1. Continued.

Applicant Project Title Project Description	Additional Water (mgd)	SFWMF Funding	Total Project Cost
City of St. Cloud Reclaimed Water System Expansion Construction of 15,700 LF of 12-inch reclaimed water mains into rapidly developing areas. This will provide reclaimed water to 1,833 units that are under development.	0.67	\$150,000	\$654,515
St. Lucie West Services District RO Water Treatment Plant Install three Floridan wells (two on-line, one stand by), new pre-filters, feed pumps, two trains of reverse osmosis treatment, degassifier, odor control, brine storage, and deep well injection.	2.60	\$150,000	\$14,070,000
Seacoast Utilities Earman Canal Reclaimed Water Construct a temporary 1,000 GPM reclaimed water pump station located at the Earman (C-18) Canal to bridge the gap between available reclaimed water and contract allocations during the off-season flows and dry weather.	1.44	\$90,000	\$180,000
City of Cape Coral Reclaimed Water ASR Permit, construct and test one 6-inch exploratory well. This test well will determine the feasibility of using ASR for storing reclaimed water during the wet season and withdrawing the reclaimed water for use during the dry season.	0.87	\$50,000	\$490,000
Collier County Utilities Carica Road ASR Exploratory Well Carica Road Potable Aquifer Storage and Recovery exploratory well testing and construction.	1.00	\$50,000	\$220,000
Orange County Utilities Woodlawn Cemetery Road Main Aquifer Recharge Site Irrigation of the Woodlawn Cemetery and Old Winter Garden Road aquifer recharge site with reclaimed water.	3.00	\$50,000	\$780,350
Collier County Utilities Vanderbilt Beach Road Reclaimed Water Main Construct 20-inch reclaimed water main from Airport Road to Village Walk Circle.	3.00	\$50,000	\$845,000
Collier County Utilities Goodlette Frank Road Force Main Construct a new reclaimed water main that will enable the distribution of reclaimed water from the North County Water Reclamation Facility to the County residents in the North Service Area.	3.00	\$50,000	\$6,797,422
Loxahatchee River District Stabilization Pond to IQ Lake Construction of an interconnect between LRD stabilization pond and onsite IQ storage lakes.	1.20	\$50,000	\$150,000
Seminole Improvement District WWTF Expansion Construction of a new reclaimed water facility as part of the existing WWTP at Seminole Pratt Whitney Road in Loxahatchee. The project includes the addition of a treatment unit, filters, modification to the existing plant, various electrical and control modifications, various mechanical modifications, yard piping and site work. Citrus grove areas within Callery Judge Grove will use reclaimed water for irrigation.	0.13	\$50,000	\$872,000
Total	66.12	\$6,000,000	\$65,296,161

UPDATE TO FISCAL YEAR 2004 ALTERNATIVE WATER SUPPLY FUNDING PROGRAM

The AWS Program Annual Report for FY2004 was published in February 2004. There were 34 projects approved for AWS funding for FY2004; however, after this report was published, three projects were canceled: City of Clewiston, South Shore Water Association, and Century Village in Palm Beach County.

The FY2004 Annual Report indicated that the District's share of the total cost (\$102 million) was \$4.5 million. The 34 projects were designed to produce 101.8 million gallons per day (mgd) when completed. In light of the three canceled projects, the District's share of funding in FY2004 was \$4.1 million, the total contract cost was \$103 million, and water made available was 99 mgd.